CONSTRUCTION, CODES, AND COMMERCE

Residential Construction Data Review (2005-2013)

SEEA
SOUTHEAST ENERGY EFFICIENCY ALLIANCE

April 2015

THE SOUTHEAST ENERGY EFFICIENCY ALLIANCE (SEEA)

The Southeast Energy Efficiency Alliance (SEEA) is one of six regional energy efficiency organizations in the United States working to transform the energy efficiency marketplace through collaborative public policy, thought leadership, outreach programs and technical advisory services. SEEA promotes energy efficiency as a catalyst for economic growth, workforce development and energy security across 11 southeastern states. These states include Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee and Virginia.

Visit SEEA online at www.seealliance.org.

REPORT AUTHORS

Ashley Fournier, Project Manager, SEEA, afournier@seealliance.org

Lauren Westmoreland, Energy Codes Manager, SEEA, lwestmoreland@seealliance.org

Judy Knight, Director of Communications, SEEA, jknight@seealliance.org

with codes analysis provided by Roxanne Greeson, Energy Codes Consultant, Roxanne.Greeson@gmail.com

DISCLAIMER

CONSTRUCTION, CODES AND COMMERCE:

RESIDENTIAL CONSTRUCTION DATA REVIEW

The following review, conducted by the Southeast Energy Efficiency Alliance (SEEA), examines the relationship between implemented residential building energy codes and new, single-family residential construction permit data from 2005 to 2013 in SEEA's 11-state region across the Southeast.

RESIDENTIAL CONSTRUCTION DATA SOURCE

The residential construction data used for this report is provided by the United States Census Bureau's Building Permit Survey. All data is free and available to the public at http://www.census.gov/construction/bps/. The data represents new, privately-owned single-family residential building projects and is based on estimates of number of permits with imputation (in lieu of reported only). For additional information on imputation methodology refer to the Resources section at the end of this document.

This report does not contain information regarding residential renovations or remodeling projects. The U.S. Census Bureau discontinued the Survey of Residential Alterations and Repairs (SORAR) in 2007, however residential renovation data is available for purchase from a number of companies. Additionally, this report does not reference information related to the costs of new residential construction projects. While this data is available, it is not sufficiently detailed enough for comparison and inclusion in this report.

HOW TO USE THIS REPORT

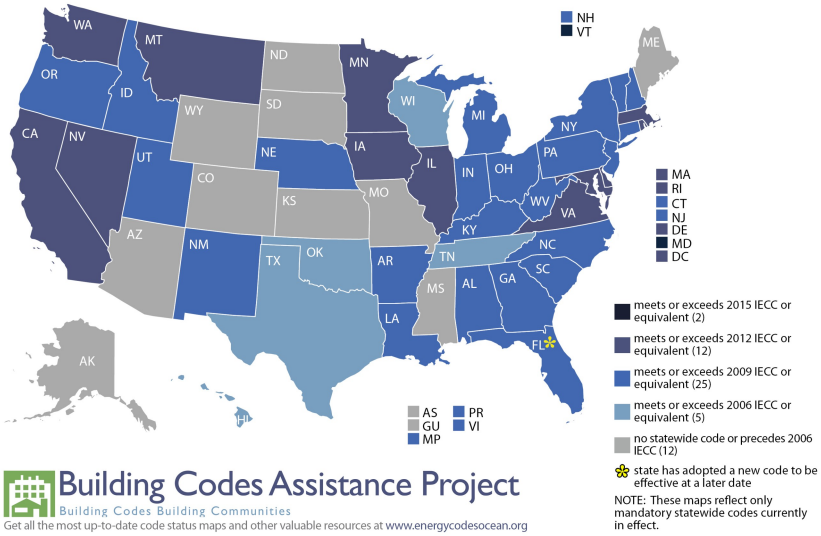
SEEA undertook an review of new residential building construction data to better understand overall residential construction trends in the southeastern United States, and specifically to get a more complete understanding of the impact that newer state-level energy codes have had, and may have in the future, on the residential building market across the region.

This report provides useful insight on residential construction activity across the Southeast and can be used by state energy offices, local planning departments, and utilities, among others, to tailor educational materials, trainings, and outreach related to residential construction and building energy code compliance for optimal impact.

REGIONAL REVIEW: THE SOUTHEAST

The information on the following pages summarizes current residential energy code status and new residential construction data at the regional level.

Residential State Energy Code Status
AS OF MARCH 1, 2015



State	Code	Effective Date	Percent of Population in Permit-Issuing Places [1]
Alabama	2009 IRC with Amendments	10/01/2012	70%
Arkansas	2009 IECC with Amendments	01/01/2015	61%
Florida	State Specific - Equivalent to 2009 IECC	03/15/2012	100%
Georgia	2009 IECC with Amendments	01/01/2011	97%
Kentucky	2009 IECC with Amendments	10/01/2014	75%
Louisiana	2006 IRC	01/01/2011	96%
Mississippi	None Statewide	-	67%
North Carolina	State Specific - 2012 North Carolina Energy Conservation Code	01/01/2012	100%
South Carolina	2009 IECC	01/01/2013	99%
Tennessee	2006 IECC	07/01/2011	88%
Virginia	2012 IECC with Amendments	07/01/2015	100%

[1]Percentages based on the 2010 Census of Population and the 20,000 permit-issuing place series.

REGIONAL REVIEW: THE SOUTHEAST

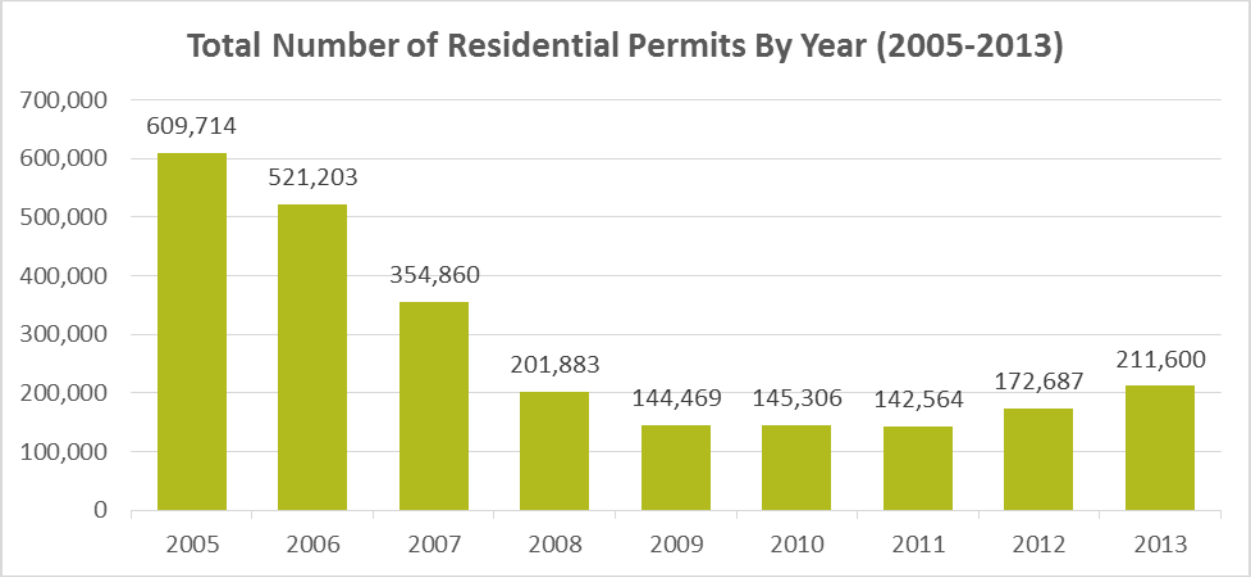
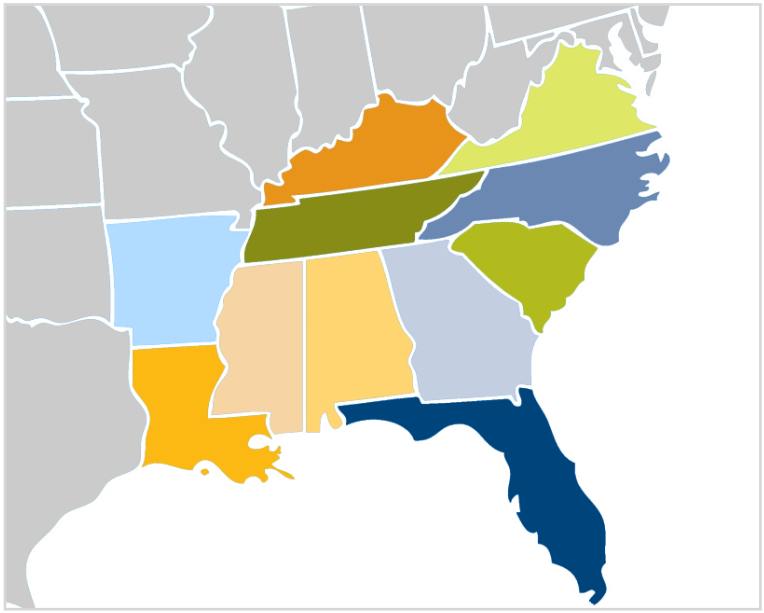


*Chart reflects single-family residential new construction projects only

Total Single-Family Residential New Construction Permits By State (2005-2013)



	FL	650,250
	NC	418,627
	GA	346,039
	VA	226,252
	SC	212,133
	TN	190,684
	LA	127,171
	AL	125,180
	KY	78,239
	MS	68,289
	AR	61,422
	Total	**2,504,286**

REGIONAL REVIEW: THE SOUTHEAST

OBSERVATIONS

As a result of this review of construction data in the Southeast from 2005 to 2013, SEEA finds the following:

- The overall data trend, which is reflected at both the regional and state level, is that:
    - Residential permit numbers decreased from 2005 through 2008.
    - From about 2009 through 2011 residential permit numbers remained steady.
    - From about 2011 through 2013 residential permit numbers have increased.
- This residential construction data trend mirrors the regional trends found in the commercial building market. Information on construction trends in the commercial building sector can be found in SEEA's whitepaper *Construction, Code and Commerce: The Economic Impact of Commercial Energy Codes in the Southeast*.
- The data shows no evidence that stronger residential building energy codes depress residential construction activity, as other factors appear to be more influential in determining construction activity levels. If codes do depress residential permit numbers, the data in this review would provide an obvious place for this evidence to present itself. Instead, we find no evidence of this relationship.
- There may be other factors affecting residential construction activity that this review does not address including mortgage interest rates, credit availability, population growth, income demographics and size of current housing stock.

MOVING FORWARD:

POTENTIAL USES FOR THESE FINDINGS

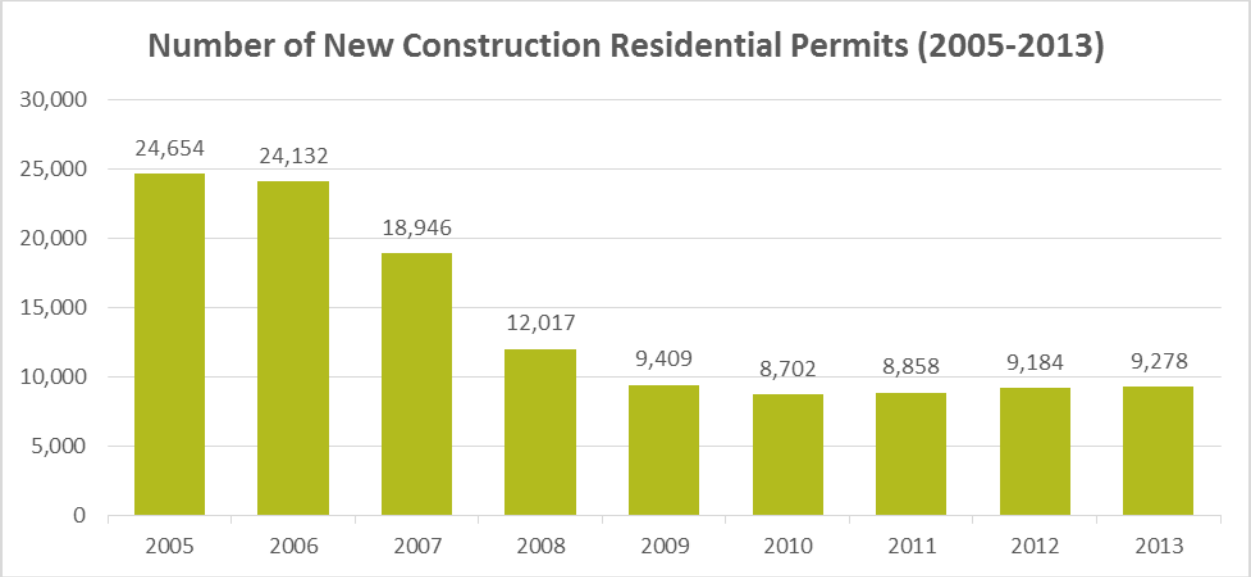
The data and findings of this report can be useful, we hope, in many applications. The following is a list of suggested, but not comprehensive, ways in which both organizations and individuals could make use of this information.

- If you or your organization works with energy code adoption, we hope this information will be helpful in addressing misconceptions that may exist among your stakeholders about the impact of stronger energy codes on construction activity.
- If you or your organization is involved with developing educational resources and trainings on energy codes, we invite you to tailor the state-based information to address your specific needs. For example, by knowing the type and volume of residential construction in your area, your teaching materials can be made more impactful for your audience.
- If you or your organization is involved in planning, the state-based information in this report provides the locations of residential construction, which we hope offers a complementary means for determining growth.

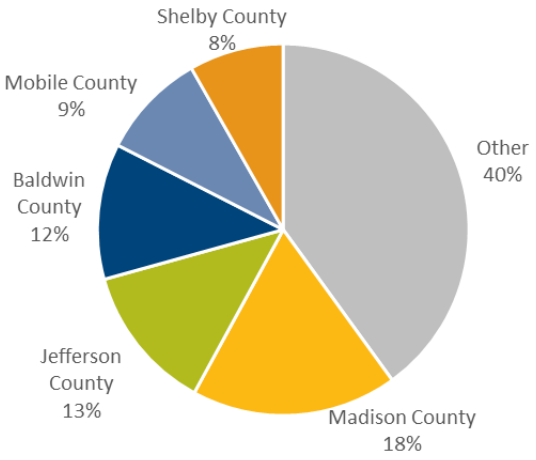
The report authors recognize there are many additional analyses that could be completed from this data, and we invite your ideas and suggestions on the kinds of analyses that would be of real application and value. Please email us your input using the contact emails provided at the beginning of this report.

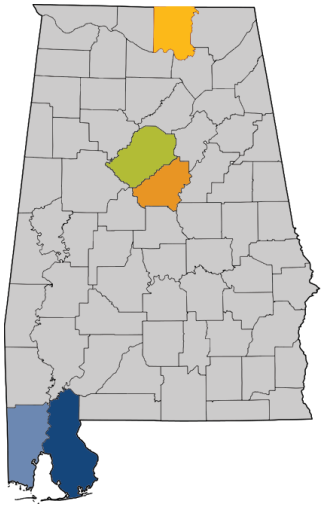
STATE REVEW: ALABAMA

Current Residential Code	2009 IRC with Amendments
Effective Date	10/01/2012
Population	4,833,722
Median Household Income	$43,160
Total Number of Residential Permits (2005-2013)	125,180



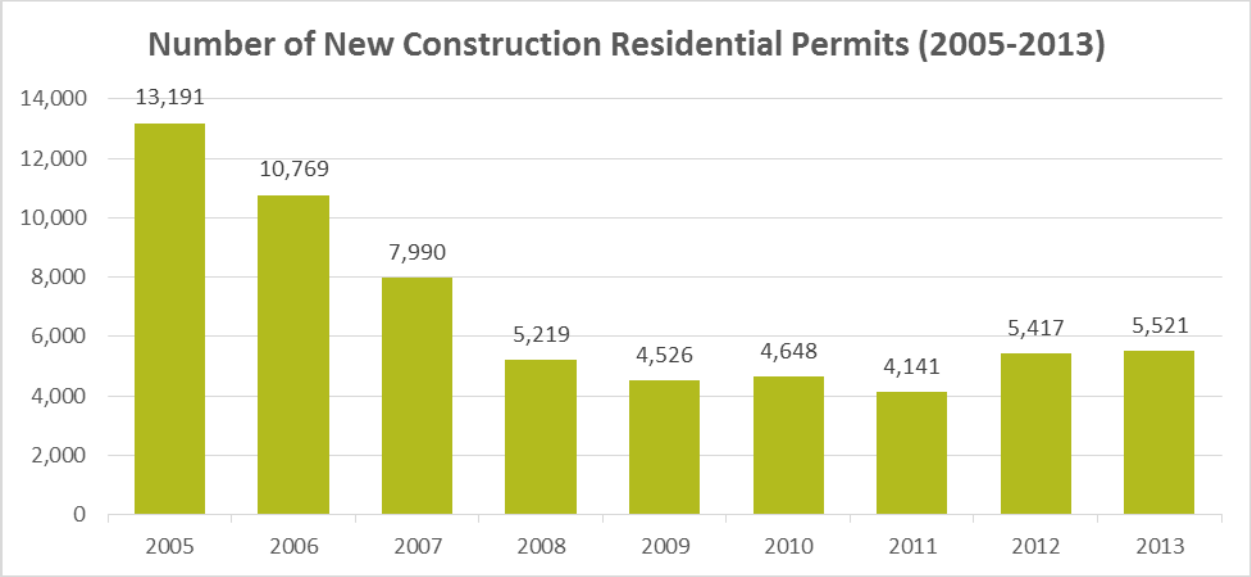
Top Five Counties by New Construction Residential Permits (2005-2013)



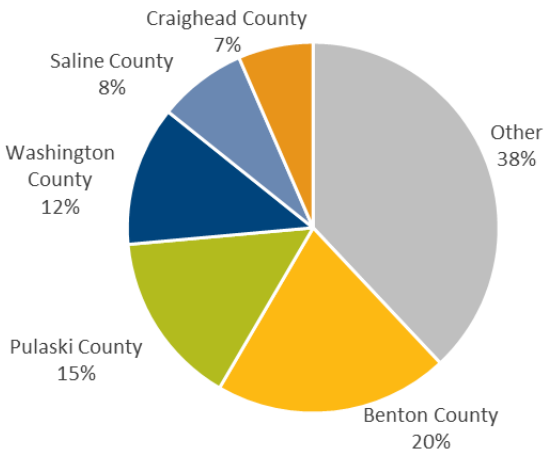


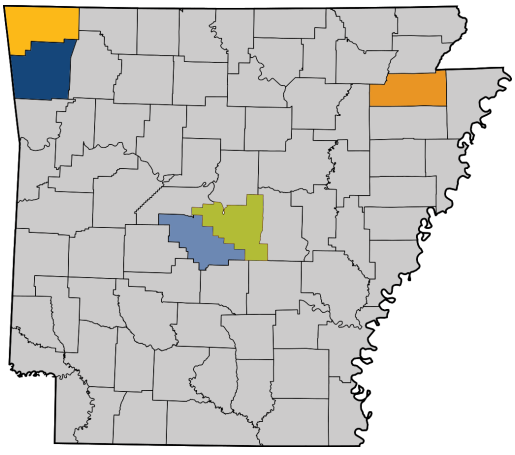
STATE REVIEW: ARKANSAS

Current Residential Code	2009 IECC with Amendments
Effective Date	01/01/2015
Population	2,959,373
Median Household Income	$40,531
Total Number of Residential Permits (2005-2013)	61,422



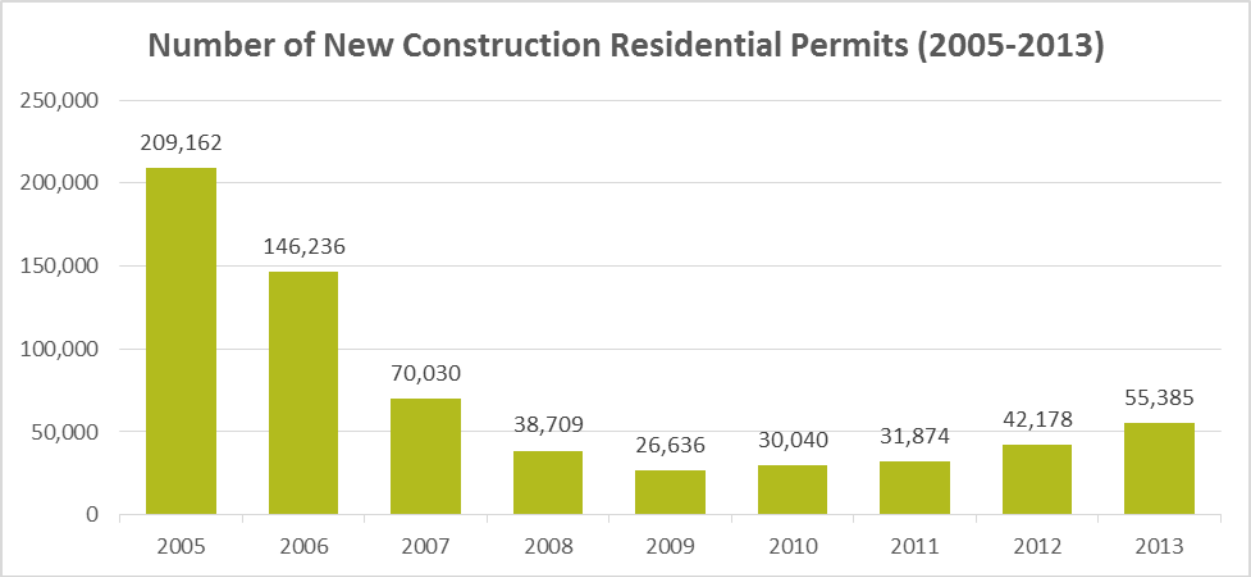
Top Five Counties by New Construction Residential Permits (2005-2013)



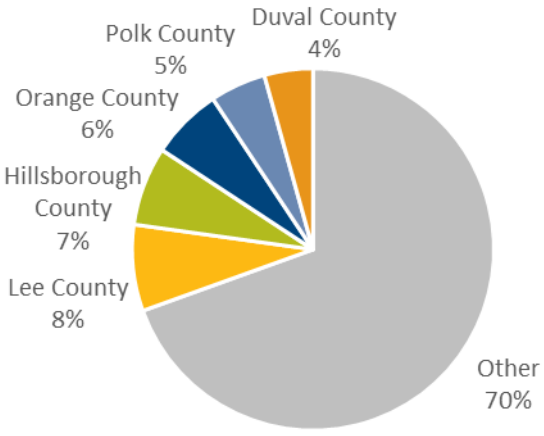


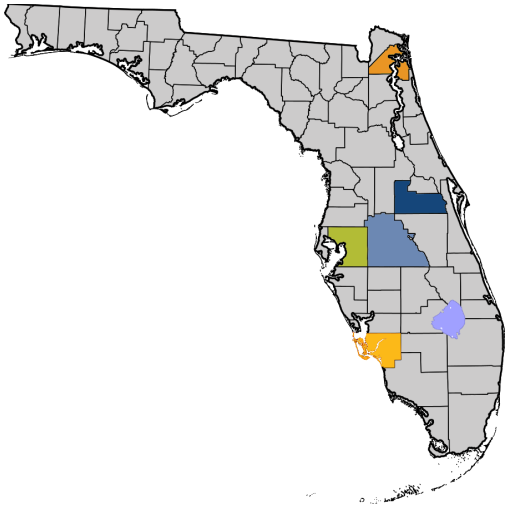
STATE REVIEW: FLORIDA

Current Residential Code	State Specific - Equivalent to 2009 IECC
Effective Date	03/15/2012
Population	19,552,860
Median Household Income	$47,309
Total Number of Residential Permits (2005-2013)	650,250



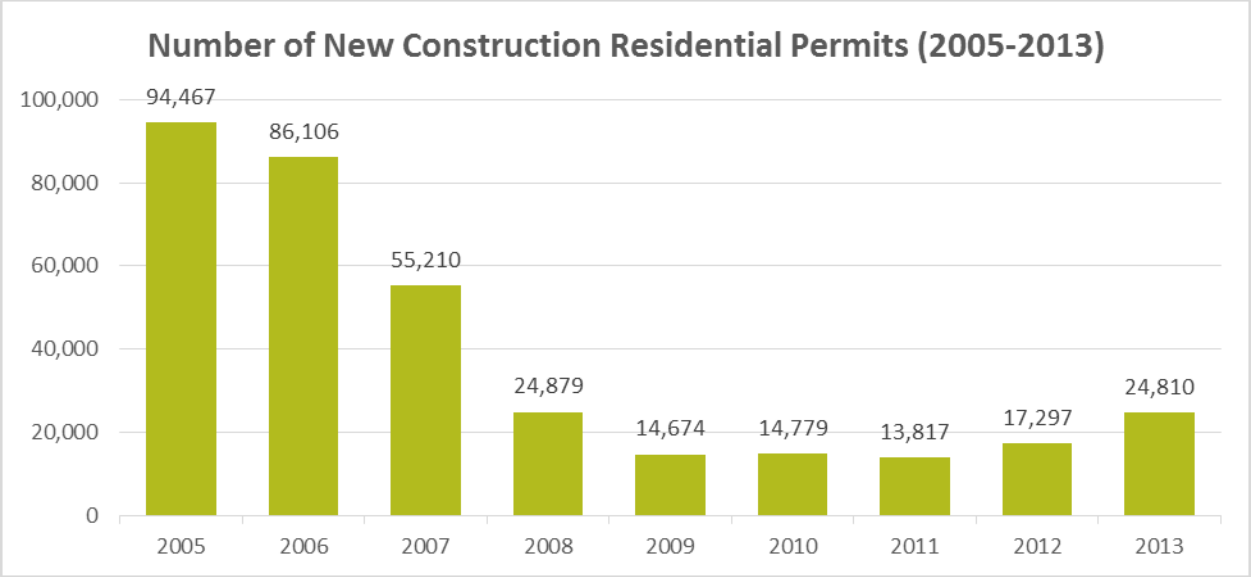
Top Five Counties by New Construction Residential Permits (2005-2013)



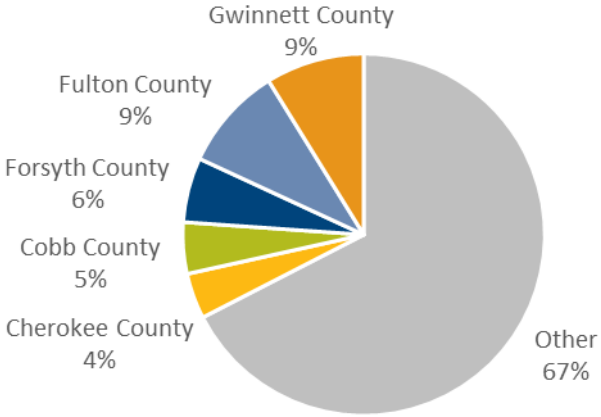


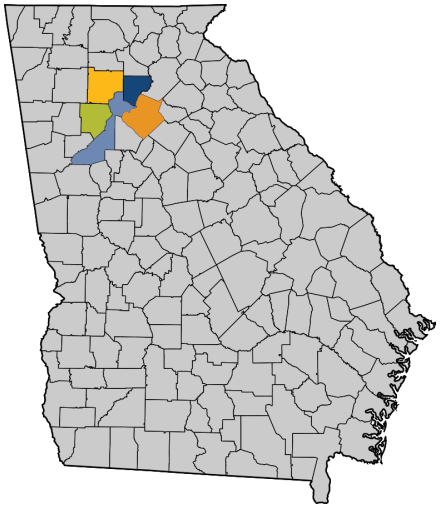
STATE REVIEW: GEORGIA

Current Residential Code	2009 IECC with Amendments
Effective Date	01/01/2011
Population	9,992,167
Median Household Income	$49,604
Total Number of Residential Permits (2005-2013)	346,039



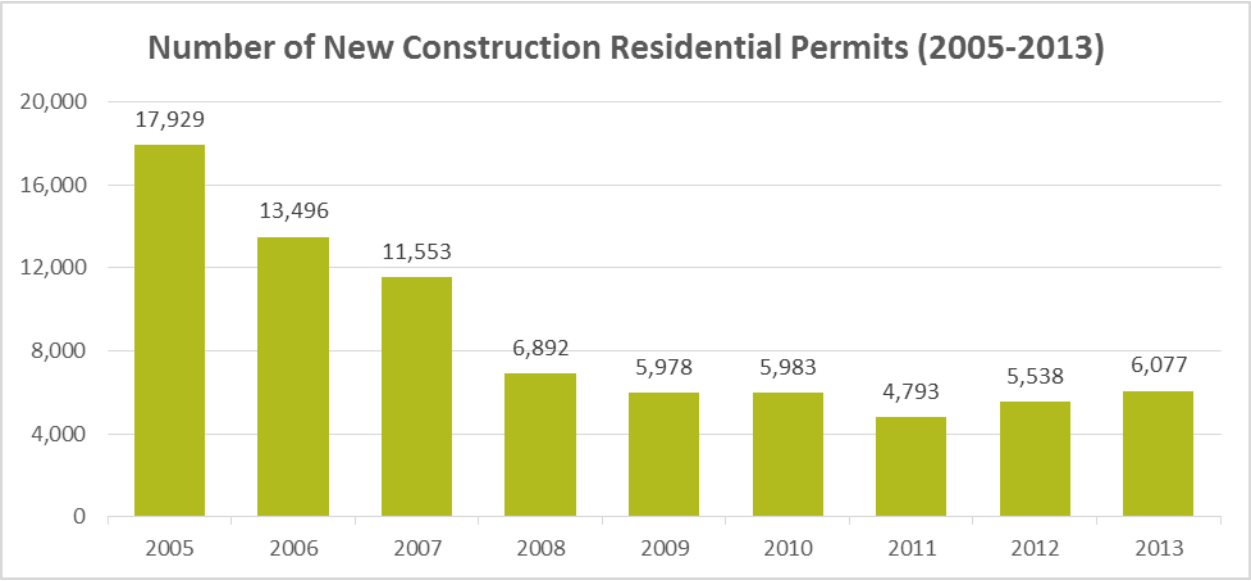
Top Five Counties by New Construction Residential Permits (2005-2013)



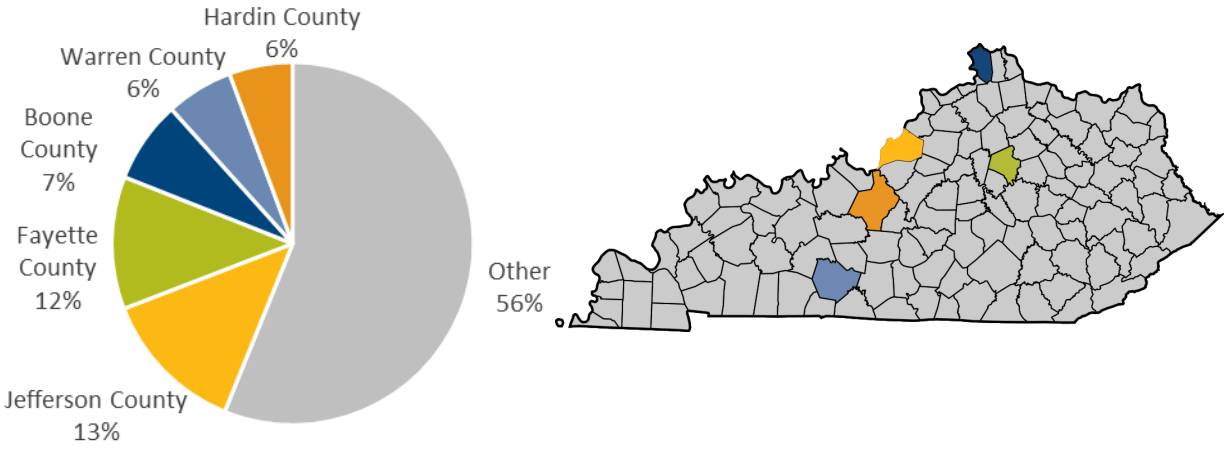


STATE REVIEW: KENTUCKY

Current Residential Code	2009 IECC with Amendments
Effective Date	10/01/2014
Population	4,395,295
Median Household Income	$42,610
Total Number of Residential Permits (2005-2013)	78,239

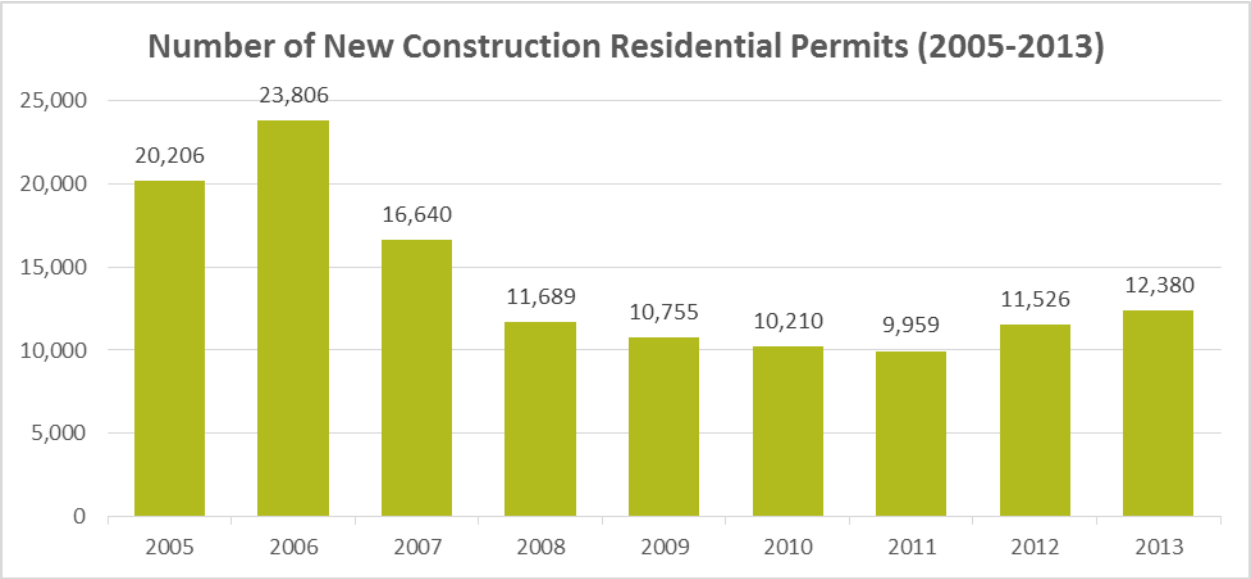


Top Five Counties by New Construction Residential Permits (2005-2013)



STATE REVIEW: LOUISIANA

Current Residential Code	2006 IRC
Effective Date	01/01/2011
Population	4,625,470
Median Household Income	$44,673
Total Number of Residential Permits (2005-2013)	127,171



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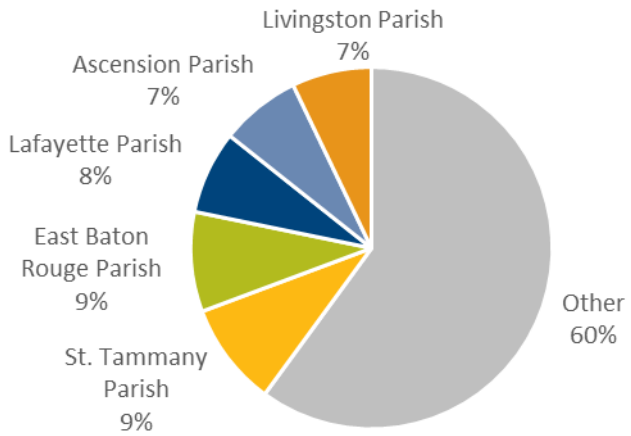
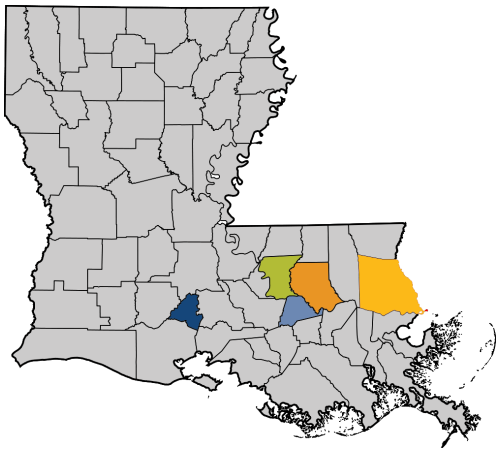
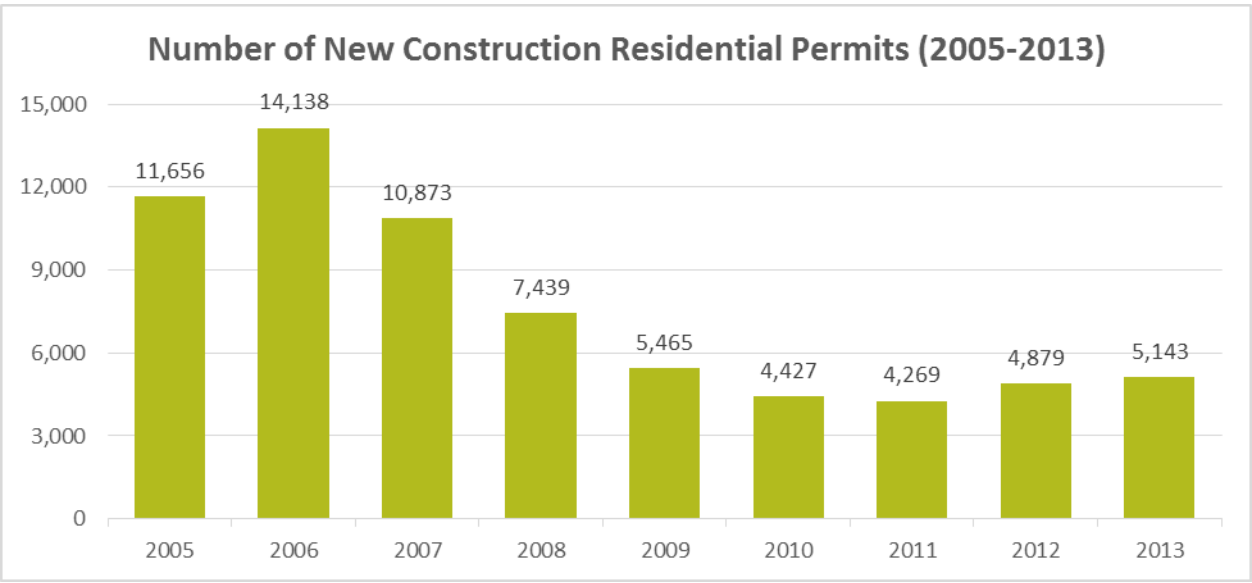


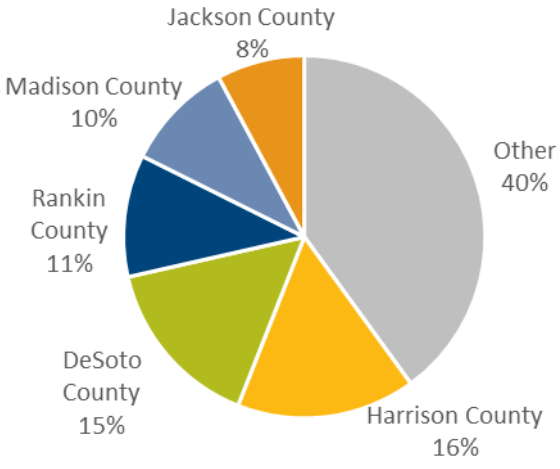


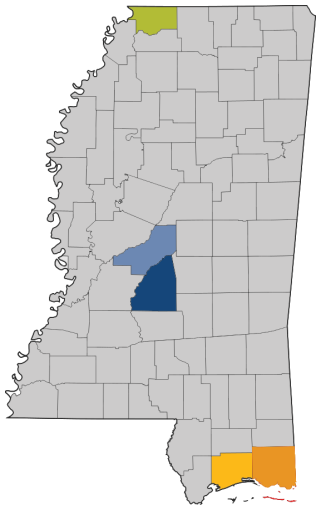
STATE REVIEW: MISSISSIPPI

Current Residential Code	None Statewide
Population	2,991,207
Median Household Income	$38,882
Total Number of Residential Permits (2005-2013)	68,289



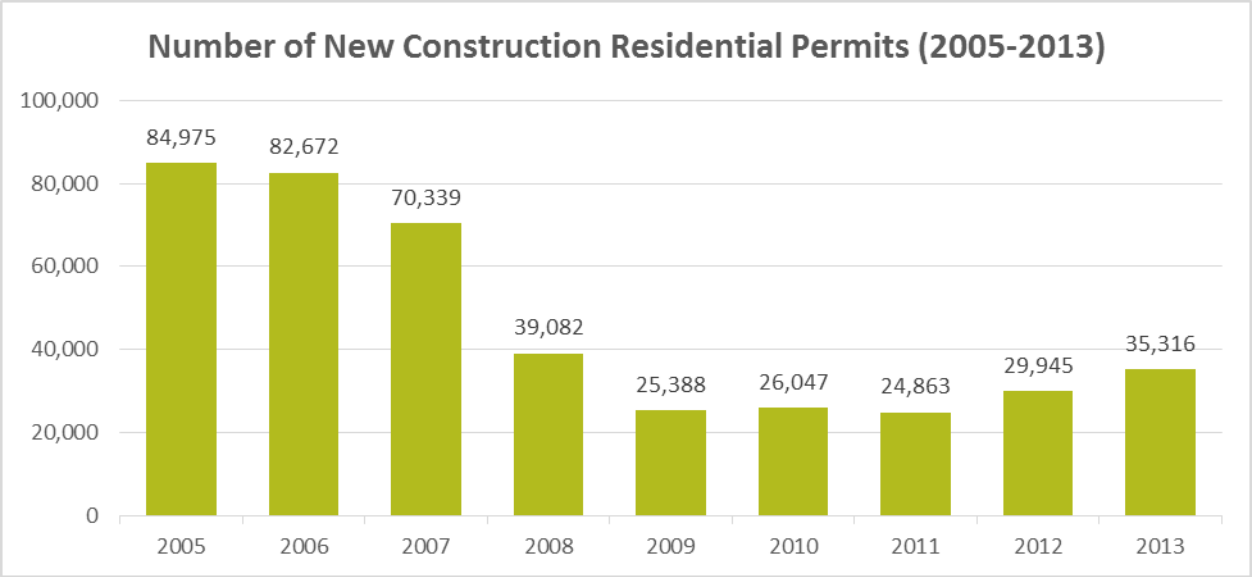
Top Five Counties by New Construction Residential Permits (2005-2013)





STATE REVIEW: NORTH CAROLINA

Current Residential Code	State Specific - 2012 North Carolina Energy Conservation Code
Effective Date	01/01/2012
Population	9,848,060
Median Household Income	$46,450
Total Number of Residential Permits (2005-2013)	418,627



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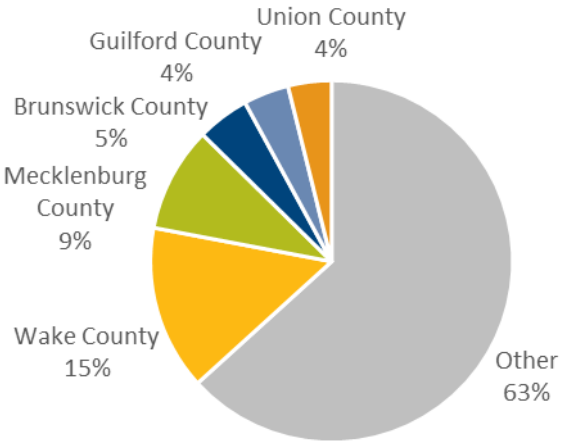
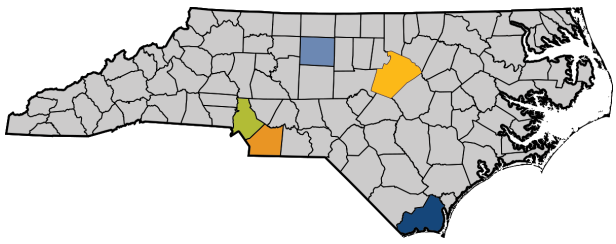
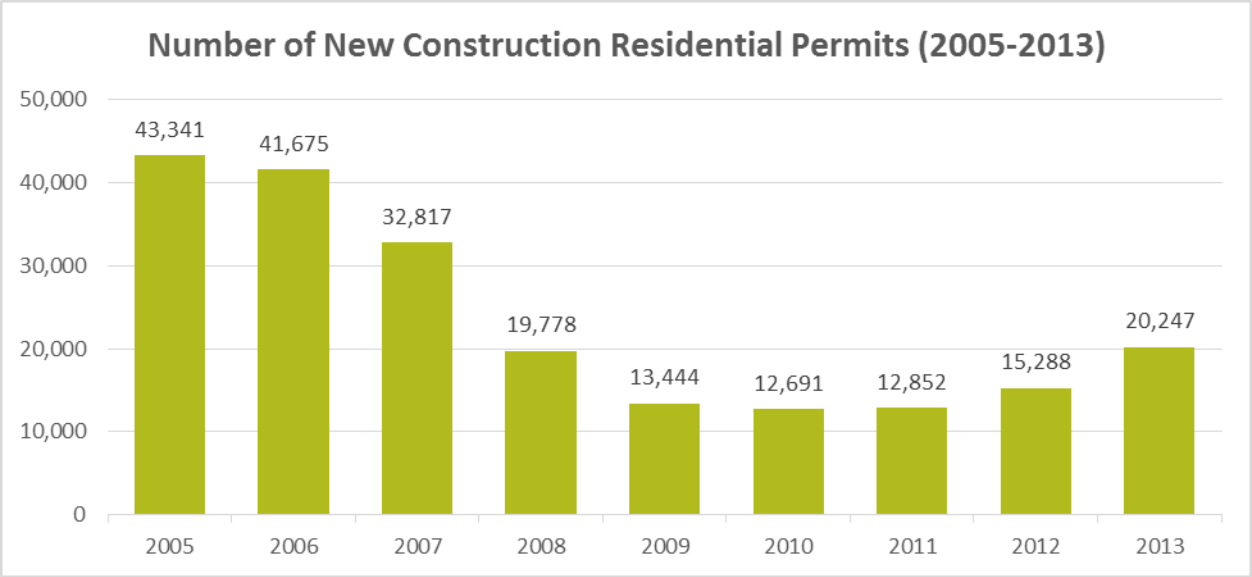


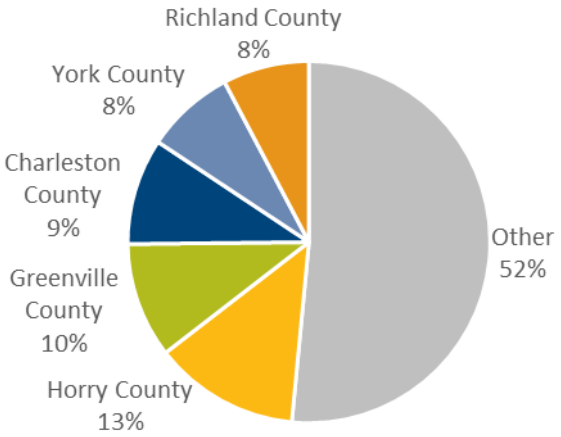


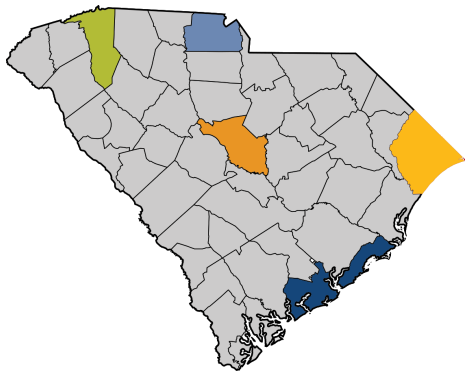
STATE REVIEW: SOUTH CAROLINA

Current Residential Code	2009 IECC
Effective Date	01/01/2013
Population	4,774,839
Median Household Income	$44,623
Total Number of Residential Permits (2005-2013)	212,133



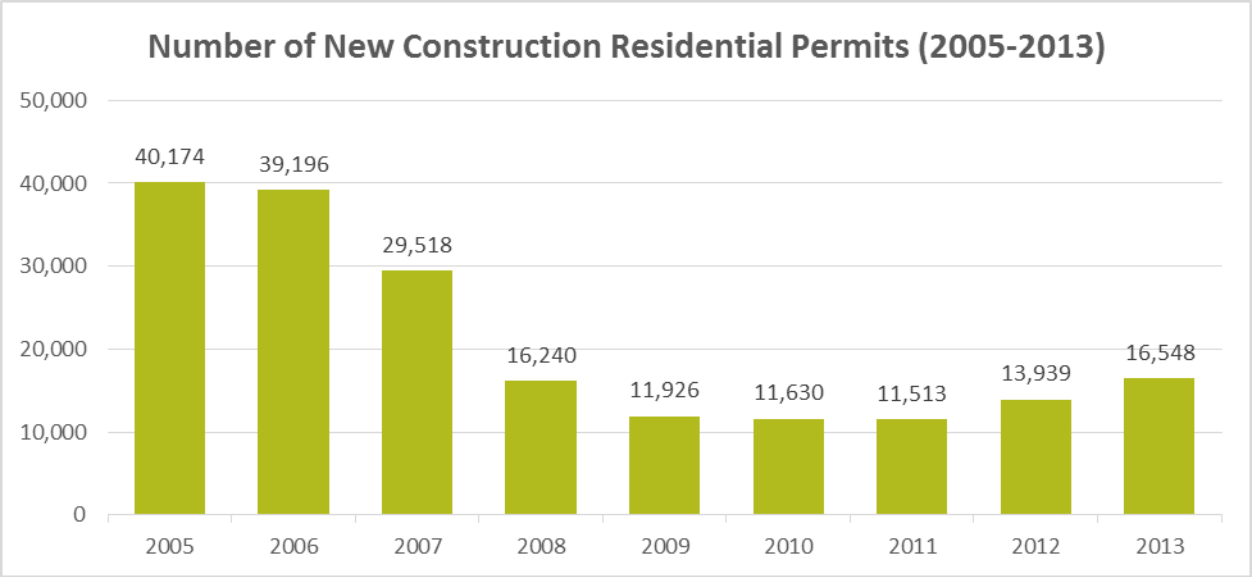
Top Five Counties by New Construction Residential Permits (2005-2013)



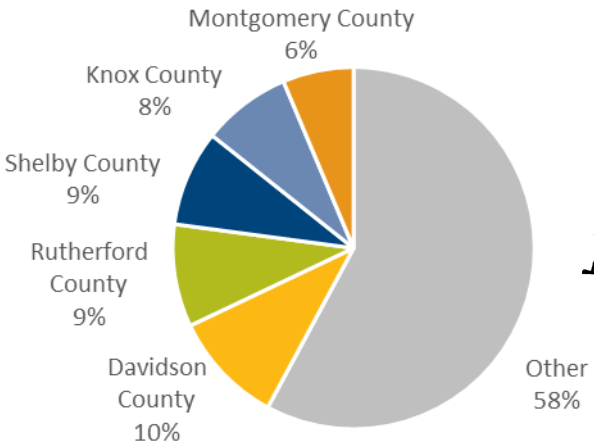


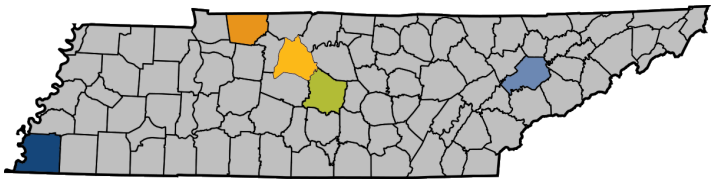
STATE REVIEW: TENNESSEE

Current Residential Code	2006 IECC
Effective Date	07/01/2011
Population	6,495,978
Median Household Income	$44,140
Total Number of Residential Permits (2005-2013)	190,684



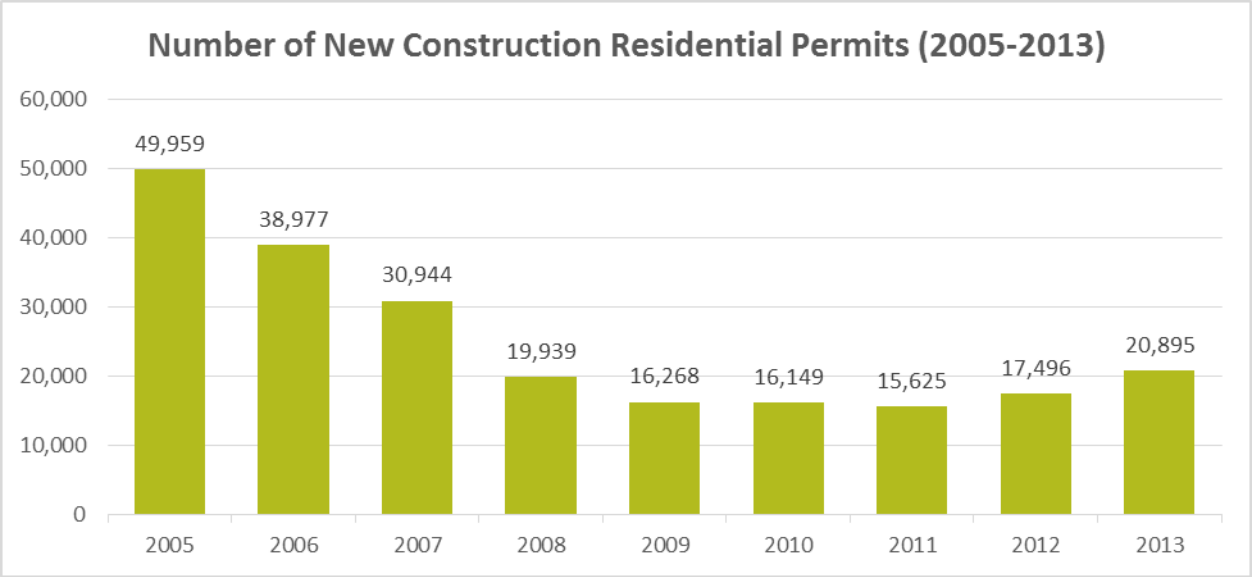
Top Five Counties by New Construction Residential Permits (2005-2013)





STATE REVIEW: VIRGINIA

Current Residential Code	2012 IECC with Amendments
Effective Date	07/01/2015
Population	8,260,405
Median Household Income	$63,636
Total Number of Residential Permits (2005-2013)	226,252



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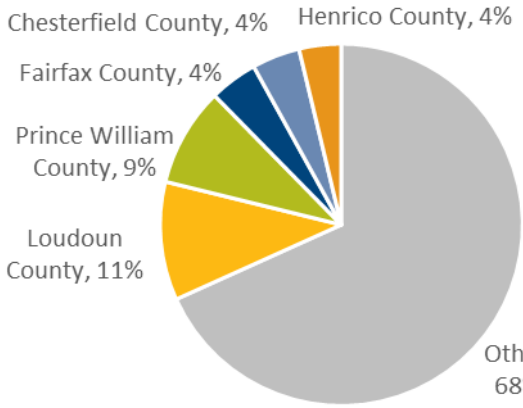

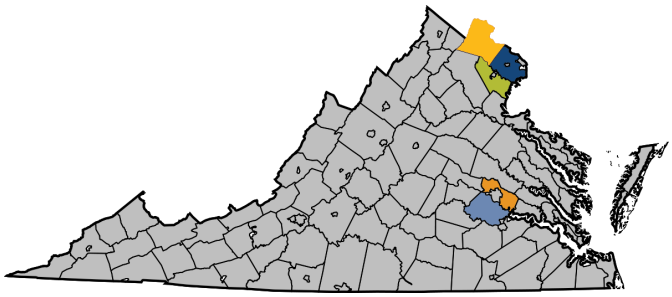

RESOURCES

Building Codes Assistance Project—Online Code Environment and Advocacy Network (OCEAN)

http://bcap-energy.org/ocean/

Construction, Codes and Commerce:
The Economic Impact of Commercial Energy Codes in the Southeast

http://www.seealliance.org/wp-content/uploads/SEEA_EnergyCode_Report_Online.pdf

Permit Data Imputation Methodology

http://www.census.gov/construction/bps/how_the_data_are_collected/

Residential Construction Data Source

http://www.census.gov/construction/bps/